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CASTILLEJA COCCINEA (OROBANCHACEAE): NEW TO TEXAS

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ABSTRACT

Castilleja coccinea, scarlet Indian paintbrush, is reported as new to Texas. The species is known only from Bowie County, which is located in the extreme northeast corner of the Pineywoods Ecoregion of the state. The distribution of *Castilleja* in Texas is briefly discussed and a list of associated flora occurring with the species is presented.
KEY WORDS: *Castilleja coccinea*, Orobanchaceae, Pineywoods, Texas

Recent field study in the Pineywoods region of northeast Texas has resulted in the discovery of the following species, reported here as new to the state. It has been found in two relict prairies in the northeasternmost county of the state.

Castilleja coccinea (L.) Spreng. (Fig. 1)

Voucher specimens: **TEXAS**. **Bowie Co.**: Godley Prairie, from Simms, 5.5 mi. N of jct. Hwy 98 and Hwy 67 on Hwy 98, W side of Hwy 98, 9 May 2010, *J.R. Singhurst and M. White 18614* (BAYLU); Little Prairie, 0.7 mi. E of jct. of County Road 4107 and County Road 4101 on County Road 4101, S side of County Road 4101, 9 May 2010, *J.R. Singhurst and M. White 18615* (BAYLU).

Until now, nine species of *Castilleja* were known to occur in Texas, with only *C. indivisa* Engelm. and *C. purpurea* (Nutt.) G. Don mapped by Turner et el. (2003) as distributed in northeast Texas. *Castilleja indivisa* is widespread in the eastern half of the state, while *C. purpurea* occurs primarily in the central and north-central part of the state (Nesom 1992). Turner et al. (2003) mapped the species as far east as Lamar County. There is also a record of *C. indivisa* (*Holmes, Singhurst, & Mink 14520*, BAYLU) from Gambill Goose Prairie, 13 km W of Paris, Lamar County, which is about 121 km west of the *C. coccinea* location in Bowie County.

The distribution of *Castilleja coccinea* extends from southern Canada southward throughout the eastern USA (USDA, NRCS 2010). In the West Gulf Coastal Plain region, the species occurs in southeastern Oklahoma (McGregor & Barkley 1977), south central Arkansas (Smith 1988), and central and southwestern Louisiana (Thomas & Allen 1997).

Godley Prairie and Little Prairie are "pocket prairies' in the northeastern edge of the Pineywoods Ecoregion. [A pocket prairie is defined here as a naturally occurring grassland that is located in and surrounded by forest, in this case mixed hardwood and shortleaf pine savannas.] These two prairies have a topography of 1–3% slope with "micro lows" (wetland depressions) and "micro highs" (pimple mounds). The soils of the depressions are typically sandy clays while those of the mounds are sand substrated alfisols. The flora consists of a mixture of midwestern tallgrass and coastal plain herbaceous prairie species. Both prairies are "hayed" yearly.

The dominant flora of Godfrey Prairie and Little Prairie includes *Sporobolus silveanus*, *Tridens strictus*, *Rhynchospora capitellata*, *Scleria pauciflora*, and *Dichanthelium aciculare*. Other prominent herbaceous flora included *Rudbeckia maxima*, *R. grandifolia*, *R. hirta*, *Orbexilum simplex*, *Asclepias hirtella*, *Liatris pycnostachya*, *Helenium flexuosum*, *Andropogon gerardii*, *Helianthus angustifolia*, *H. mollis*, *Allium canadense* var. *hyacinthoides*, *Coreopsis tinctoria*, *Coreopsis basalis*, *Tephrosia onobrychoides*, *Scleria triglomerata*, *Echinacea pallida*, *Physostegia digitalis*, *Silphium laciniatum*, *Pycnanthemum tenuifolium*, *Rhexia mariana* var. *interior*, *Andropogon virginicus* var. *virginicus*, *Rhynchospora recognita*, *Sorghastrum nutans*, *Juncus brachycarpus*, *J. marginatus*, and *Drosera brevifolia*. Other regionally rare species are *Schoenolirion wrightii*, which is extremely abundant, and *Camassia angusta*, which is scattered.

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Figure 1. *Castilleja coccinea* in Godley Prairie, Bowie County, Texas (photo by Jason Singhurst).